

Thermodynamics of activation of a viscous current and structural dynamic analysis high-viscosity oil at ultrasonic influence

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Abstract

Complex calculations are carried out in a wide interval of temperatures at various ultrasonic duration of power characteristics in the viscous-current process of the difficult structural units (VCDS) at high-viscosity oil (HVO). Power characteristics are calculated of the viscous current activation. Researches are carried out of the high-viscosity oil samples by a pulse nuclear magnetic resonance. The work calculation results in the viscous current process are presented on the basis of the carried-out pilot studies of HVO power characteristics.

Keywords

Difficult structural unit, High-viscosity oil, Pulse nuclear magnetic resonance spectroscopy, Rheology, Thermodynamics